

Total No. of Questions : 12]

SEAT No. :

P3421**[4959]-196**

[Total No. of Pages : 3

B.E. (Information Technology)
d:ADVANCED COMPUTER NETWORKS
(2008 Course) (Semester - II) (Elective - III) (414450)

*Time : 3 Hours]**[Max. Marks : 100**Instructions to the candidates:*

- 1) *Answers to the two sections should be written in separate answer books.*
- 2) *Answer three questions from each section.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Figures to the right side indicate full marks.*
- 5) *Use of Calculator is allowed.*
- 6) *Assume Suitable data if necessary.*

SECTION - I

- Q1)** a) Explain in detail the layers of ISO/OSI model. **[10]**
- b) State and explain various principles of network design. **[8]**

OR

- Q2)** a) List the Networking principles and services with Layered architecture? **[12]**
- b) Explain in detail Internet, ATM and cell phone. **[6]**

- Q3)** a) Draw and explain the ATM header. Explain the structure of the header. **[8]**
- b) Explain mobility management issues in wireless networks. **[8]**

OR

- Q4)** a) Define Wireless communication and explain its architecture? **[8]**
- b) Explain WDM system with diagram in Optical Networks. **[8]**

P.T.O.

- Q5) a)** What are various parameters of Quality of Service? Explain. [6]
- b) Explain Congestion control and Flow control mechanism of datagram network w.r.t. Open Loop and Closed Loop. [10]

OR

- Q6) a)** Explain congestion control mechanism of ATM network w.r.t. [8]
- i) Internal congestion control
- ii) Global congestion control
- b) Explain Marcov Chain Models w.r.t. M/M/1 queue and M/M/2 queue. [8]

SECTION - II

- Q7) a)** Write notes on: BGP and RIP. [10]
- b) Define traffic engineering and explain TE with MPLS. [8]

OR

- Q8) a)** Explain formats of various BGP messages. [8]
- b) What are VPNs? Explain the significance of tunneling in VPNs. [10]

- Q9) a)** State the general characteristics of Mobile IP. [6]
- b) List and explain various features of IPv6. [10]

OR

- Q10) a)** Describe RTP and RSVP. [8]
- b) Explain API for IPv6. [8]

- Q11)a)** What is cluster based network architecture for ad-hoc networks. [6]
b) What is ad-hoc network? Explain its limitations and application areas.[10]

OR

- Q12)a)** Explain implement of firewall in the network. [8]
b) What are overlay networks? Why it is important? [8]

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